

1/4" SONY SUPER HAD CCD COLOR DAY & NIGHT MINITRAX DOME CAMERA ART. 40797



Please read this manual thoroughly before use and keep it for future reference.







WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE. DO NOT INSERT ANY METALLIC OBJECT THROUGH THE VENTILATION GRILLS OR OTHER OPENINGS ON THE EQUIPMENT.

CAUTION



Explanation of graphical symbols



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to person.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

The user is obliged to inform himself and to conform himself to the national and local rules concerning the monitoring and the audio and video recording. Nobody else will consequently be held responsible for an improper use of this system which could break the laws in force.

LIMITATION OF LIABILITY

THE INFORMATION IN THIS PUBLICATION IS BELIEVED TO BE ACCURATE IN ALL RESPECTS, HOWEVER, WE CANNOT ASSUME RESPONSIBILITY FOR ANY CONSEQUENCES RESULTING FROM THE USE THEREOF. THE INFORMATION CONTAINED HEREIN IS SUBJECT TO CHANGE WITHOUT NOTICE. REVISIONS OR NEW EDITIONS TO THIS PUBLICATION MAY BE ISSUED TO INCORPORATE SUCH CHANGES.

Important Safeguards

1. Read Instructions

All the safety and operating instructions should be read before the appliance is operated.

2. Retain Instructions

The safety and operating instructions should be retained for future reference.

3. Cleaning

Unplug this equipment from the wall outlet before cleaning it. Do not use liquid aerosol cleaners. Use a damp soft cloth for cleaning.

4. Attachments

Never add any attachments and/or equipment without the approval of the manufacturer as such additions may result in the risk of fire, electric shock or other personal injury.

5 Water and/or Moisture

Do not use this equipment near water or in contact with water.

6. Placing and Accessories

Do not misplace this equipment other than upright position. This equipment has an open frame SMPS (Switching Mode Power Supply), which may cause a fire or electric shock if anything is inserted into the unit through the ventilation holes on the side of the equipment.

Do not place this equipment on an unstable cart, stand or table. The equipment may fall, causing serious injury to a child or adult, and serious damage to the equipment.



This equipment and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the equipment and cart combination to overturn.

7. Power Sources

This equipment should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power, please consult your equipment dealer or local power company.

8. Power Cords

Operator or installer must remove power and TNT connections before handling the equipment.

9. Lightning

For added protection for this equipment during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the equipment due to lightning and power-line surges.

10. Overloading

Do not overload wall outlets and extension cords as this can result in the risk of fire or electric shock.

11. Objects and Liquids

Never push objects of any kind through openings of this equipment as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the equipment.

Servicing

Do not attempt to service this equipment yourself. Refer all servicing to qualified service personnel.

13. Damage requiring Service

Unplug this equipment from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- A. When the power-supply cord or the plug has been damaged.
- B. If liquid is spilled, or objects have fallen into the equipment.
- C. If the equipment has been exposed to rain or water.
- D. If the equipment does not operate normally by following the operating instructions, adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the equipment to its normal operation.
- E. If the equipment has been dropped, or the cabinet damaged.
- F. When the equipment exhibits a distinct change in performance this indicates a need for service.

14. Replacement Parts

When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.

15. Safety Check

Upon completion of any service or repairs to this equipment, ask the service technician to perform safety checks to determine that the equipment is in proper operating condition.

Field Installation

This installation should be made by a qualified service person and should conform to all local codes.

17. Correct Batteries

Warning: Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

18 Tmrs

A manufacturer's maximum recommended ambient temperature (Tmra) for the equipment must be specified so that the customer and installer may determine a suitable maximum operating environment for the equipment.

19. Elevated Operating Ambient Temperature

If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the manufacturer's maximum rated ambient temperature (Tmra).

20. Reduced Air Flow

Installation of the equipment in the rack should be such that the amount of airflow required for safe operation of the equipment is not compromised.

21. Mechanical Loading

Mounting of the equipment in the rack should be such that a hazardous condition is not caused by uneven mechanical loading.

22. Circuit Overloading

Consideration should be given to connection of the equipment to supply circuit and the effect that overloading of circuits might have on over current protection and supply wiring. Appropriate consideration of equipment nameplate ratings

23. Reliable Earthing (Grounding)

Reliable grounding of rack mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g., use of power strips).

FCC COMPLIANCE STATEMENT.

FCC INFORMATIONS: THIS EQUIPMENT HAS BEEN TESTED AND FOUND TO COMPLY WITH THE LIMITS FOR CLASS A DIGITAL DEVICE, PURSUANT TO PART 15 OF THE FCC RULES. THESE LIMITS ARE DESIGNED TO PROVIDE REASONABLE PROTECTION AGAINST HARMFUL INTERFERENCE IN A RESIDENTIAL INSTALLATION. THIS EQUIPMENT GENERATES, USE AND CAN RADIATE RADIO FREQUENCY ENERGY AND, IF NOT ISTALLED AND USED IN ACCORDANCE WITH THE INSTRUCTIONS, MAY CAUSE HARMFUL INTERFERENCE TO RADIO COMMUNICATIONS. HOWEVER, THERE IS NO GUARANTEE THAT INTERFERENCE WILL NOT OCCUR IN A PARTICULAR INSTALLATION. IF THIS EQUIPMENT DOES CAUSE HARMFUL INTERFERENCE TO RADIO OR TELEVISION RECEPTION, THE USER IS ENCOURAGED TO CORRECT THE INTERFERENCE TO OWN EXPENSES.

CAUTION: CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE PARTY RESPONSIBLE FOR COMPLIANCE COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

THIS CLASS A DIGITAL DEVICE COMPLIES WITH CANADIAN RULES.

CE COMPLIANCE STATEMENT

WARNING:

THIS IS A CLASS A DIGITAL DEVICE. IN A DOMESTIC ENVIRONMENT THIS PRODUCT MAY CAUSE RADIO INTERFERENCE, IN WHICH CASE THE USER MAY BE REQUIRED TO TAKE ADEQUATE MEASURES.

1 Introduction

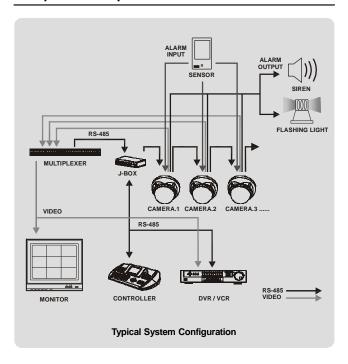


1.1 Features

The PTZ Dome keyboard controller and the PTZ Dome camera make up the building blocks for any surveillance/security system. Using multiple keyboard controllers and multiple dome cameras, no place is too large for monitoring. Extensible and flexible architecture facilitates remote control functions for a variety of external switching devices such as multiplexers and DVRs.

- Auto focus 22X Optical Zoom (11X Digital Zoom)
- Day & Night (Auto / BW / Color / Global)
- Pan 360°Endless Rotation
- 60 Preset Positions
- 4 Tours consist of Preset, the Speed is selectable from 1 to 10
- 4 Auto Scans, the Speed is selectable from 1 to 10
- 8 Area Titles
- Home Function. Camera automatically goes to preset, tour, autoscan after controller has been die for an amount of time
- 1 Alarm Input (OFF / NC / NO), 1 Alarm Output (OFF / NC / NO) and 2 Alarm states (momentary, time out)
- Programmable user preferences (preset, tour, auto scan, area title, alarm, etc.)
- Up to 63 selectable camera addresses
- Built-in RS-485 receiver driver
- Clear bubble with black liner (shelter) for concealing the camera
- Optional tinted bubble, wall mount
- AC 24V or DC 12V
- Use Certified/Listed Class 2 power supply transformer only

1.2 Operation Requirements

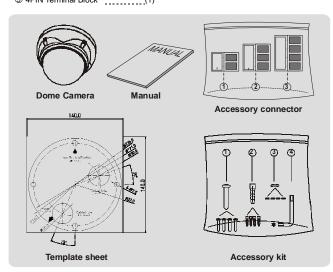


2 Installation and Connection



2.1 Package Contents

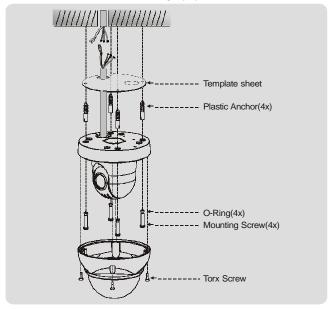
Dome camera		
· Instruction manual (Th	is documen	nt)
Template sheet		
Accessory kit		
① Mounting screws (PH 6 x 3	35.0) (4)	
② Plastic anchors	(4)	
③ O-Ring	(4)	
4 Torx wrench (T-25)	(1)	
 Accessory connector 		
① 2PIN Terminal Block	(1)	
2 3PIN Terminal Block	(1)	
2 ADIN Terminal Block	(1)	



2.2 Base Installation

 Make mounting holes and cable hole in the place (ceiling) to wich this dome camera is installed using the supplied template sheet.

Warning: The total mass of the main unit is approx 1.3kg. Check whether the ceiling to which the Dome Camera is installed is strong enough to hold the unit mass. If not, the Dome Camera could fall, causing injury.

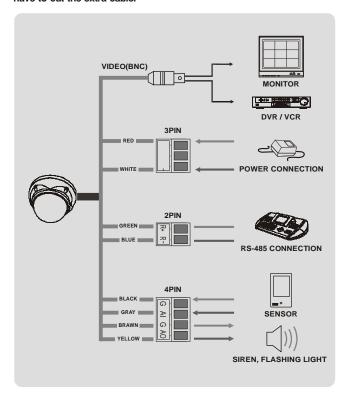


- 2. Extract each wire through the cable hole, and connect the supplied power, RS-485 and alarm-in-out Terminal Block.
- 3. Unlock torx screws (4x) the dome cover and fix the dome base firmly with supplied mounting screws (4x), plastic anchors (4x), O-Rings (4x)
- 4. Lock the housing cover with torx screws (4x).

2.3 Basic Configuration PTZ Dome Camera System

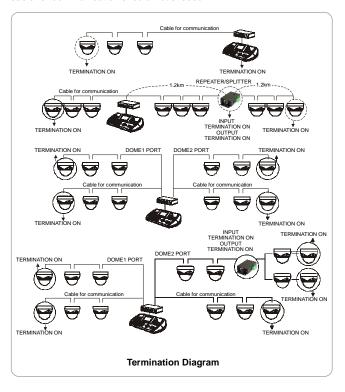
CAUTION

Do not connect the power cable until all other connections have been completed. If you complete the whole connection of cameras, then you have to cut the extra cable.

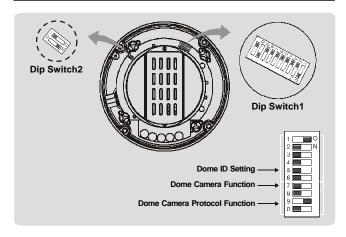


2.4 Setting Dome Camera Termination

The device which is connected at end of line, whether it be a dome camera or keyboard controller, must have the cable for communication terminated by setting the "485-TERMINATION" ON at the DOME SETUP MENU of the OSD (Refer to 3.9-2 485-TERMINATION). Without proper termination, there is potential for control signal errors. Total length of the cable for communication should not exceed 1.2km.



2.5 Setting the Protocol of Dome Camera



S/W-No.	ON	OFF	Function
7	NTSC	PAL	NTSC/PAL

Figure 1 - Dome Camera Function Select Switch

No. 8	No. 9	No. 10	Protocol
OFF	ON	OFF	Fastrax-II
OFF	OFF	OFF	Pelco-D
ON	OFF	OFF	Pelco-P

Figure 2 - Dome Camera Protocol Selection Switches

No. 1	No. 2	BPS	
OFF	OFF	2400bps	
ON	OFF 4800bps		
OFF	ON	9600bps	
ON	ON	19200bps	

Figure 3 - Dome Camera Baud Rate Setting Switches

2.6 Setting Address (ID) of Dome Camera

To prevent wrong operation and malfunction, each dome camera must have a unique address (ID).

The factory default setting is 1.

Refer to Figures 1 and Table 1 for setting the dome camera address (ID) and protocol selection.



TABLE1: ID SETTING

175 6 1 1						
ID Address						
1	ON	OFF	OFF	OFF	OFF	OFF
2	OFF	ON	OFF	OFF	OFF	OFF
3	ON	ON	OFF	OFF	OFF	OFF
4	OFF	OFF	ON	OFF	OFF	OFF
5	ON	OFF	ON	OFF	OFF	OFF
6	OFF	ON	ON	OFF	OFF	OFF
7	ON	ON	ON	OFF	OFF	OFF
8	OFF	OFF	OFF	ON	OFF	OFF
9	ON	OFF	OFF	ON	OFF	OFF
10	OFF	ON	OFF	ON	OFF	OFF
11	ON	ON	OFF	ON	OFF	OFF
12	OFF	OFF	ON	ON	OFF	OFF
13	ON	OFF	ON	ON	OFF	OFF
14	OFF	ON	ON	ON	OFF	OFF
15	ON	ON	ON	ON	OFF	OFF
16	OFF	OFF	OFF	OFF	ON	OFF
17	ON	OFF	OFF	OFF	ON	OFF
18	OFF	ON	OFF	OFF	ON	OFF
19	ON	ON	OFF	OFF	ON	OFF
20	OFF	OFF	ON	OFF	ON	OFF
21	ON	OFF	ON	OFF	ON	OFF
22	OFF	ON	ON	OFF	ON	OFF
23	ON	ON	ON	OFF	ON	OFF
24	OFF	OFF	OFF	ON	ON	OFF
25	ON	OFF	OFF	ON	ON	OFF
26	OFF	ON	OFF	ON	ON	OFF

ID Address						
27	ON	ON	OFF	ON	ON	OFF
28	OFF	OFF	ON	ON	ON	OFF
29	ON	OFF	ON	ON	ON	OFF
30	OFF	ON	ON	ON	ON	OFF
31	ON	ON	ON	ON	ON	OFF
32	OFF	OFF	OFF	OFF	OFF	ON
33	ON	OFF	OFF	OFF	OFF	ON
34	OFF	ON	OFF	OFF	OFF	ON
35	ON	ON	OFF	OFF	OFF	ON
36	OFF	OFF	ON	OFF	OFF	ON
37	ON	OFF	ON	OFF	OFF	ON
38	OFF	ON	ON	OFF	OFF	ON
39	ON	ON	ON	OFF	OFF	ON
40	OFF	OFF	OFF	ON	OFF	ON
41	ON	OFF	OFF	ON	OFF	ON
42	OFF	ON	OFF	ON	OFF	ON
43	ON	ON	OFF	ON	OFF	ON
44	OFF	OFF	ON	ON	OFF	ON
45	ON	OFF	ON	ON	OFF	ON
46	OFF	ON	ON	ON	OFF	ON
47	ON	ON	ON	ON	OFF	ON
48	OFF	OFF	OFF	OFF	ON	ON
49	ON	OFF	OFF	OFF	ON	ON
50	OFF	ON	OFF	OFF	ON	ON
51	ON	ON	OFF	OFF	ON	ON
52	OFF	OFF	ON	OFF	ON	ON
53	ON	OFF	ON	OFF	ON	ON
54	OFF	ON	ON	OFF	ON	ON
55	ON	ON	ON	OFF	ON	ON
56	OFF	OFF	OFF	ON	ON	ON
57	ON	OFF	OFF	ON	ON	ON
58	OFF	ON	OFF	ON	ON	ON
59	ON	ON	OFF	ON	ON	ON
60	OFF	OFF	ON	ON	ON	ON
61	ON	OFF	ON	ON	ON	ON
62	OFF	ON	ON	ON	ON	ON
63	ON	ON	ON	ON	ON	ON

For example:

ID Address	SW1	SW2	SW3	SW4	SW5	SW6
1	ON	OFF	OFF	OFF	OFF	OFF



ID Address	SW1	SW2	SW3	SW4	SW5	SW6
2	OFF	ON	OFF	OFF	OFF	OFF



.

.

•

ID Address	SW1	SW2	SW3	SW4	SW5	SW6
63	ON	ON	ON	ON	ON	ON



2.7 Connecting Wiring

2.7-1 Connecting to the RS-485

The dome camera can be controlled remotely by an external device or control system, such as a control keyboard, using RS-485 half-duplex.

2.7-2 Connecting Video out connector

Connect the video out(BNC) connector to the monitor or video input of the DVR.

2.7-3 Connecting Alarms

· Al (Alarm In)

You can use external devices to trigger the dome camera to react to events.

Mechanical or electrical switches can be wired to the AI (Alarm In) and G (Ground) connectors. See Chapter 3 - Program and Operation for configuring alarm input.

· G (Ground)

NOTE: All the connectors marked G or GND are common.

Connect the ground side of the alarm input and/or alarm output to the G (Ground) connectors.

· AO (Alarm Out)

The dome camera can activate external devices such as buzzers or lights. Connect the device to the AO (Alarm Out) and G (Ground) connectors. See Chapter 3 - Program and Operation for configuring alarm output.

2.7-4 Connecting the Power

Connect the power of AC 24V or DC 12V 1A to the dome camera. When using a DC 12V adapter, connector the positive(+) pole to the 'AC+' position and the negative(-) pole to the 'AC-' position. Use Certified / Listed Class 2 power supply transformer only.

3 Program and Operation



Notice

The symbols shown below mean some action of the joystick controller is required.

▲ / ▼ : move joystick up and down direction.

◀ / ►: move joystick left and right direction.

• : twist joystick.

KEY : push defined key.

3.1 Start up Screen

START UP PROTOCOL : FASTRAX-II

> DOME : 01 VX.XX

3.2 Main Menu

MAIN MENU
PRESET
TOUR
AUTO SCAN
AREA TITLE
ALARM
CAMERA SETUP
DOME SETUP
EXIT

▲ / ▼ : move cursor up and down.

select.

√ESC · exit current menu.

The **MAIN MENU** displays the available all functions of dome. You should press **MENU** key to display the **MAIN MENU**.

3.3 Preset Menu

▲ / ▼ : move cursor up and down.

◀ / ▶: move cursor left and right or select or change values.

 : move dome camera to saved preset point at NUMBER:xx, or character at

√ESC : exit current menu.

If you need to view specific places routinely, you should program presets. A preset is a programmed video scene with memorized pan, tilt and zoom settings. Once programmed, selecting the preset number in your Keyboard or DVR automatically calls up the preset. In addition, presets may be assigned to the Home Function or Home Position. The dome is capable of as many as 60 presets when using an external keyboard.

3.3-1 Set Presets at the MENU

- Move to the NUMBER: 01 and select the Preset Number by using joystick.
- Press IRIS OPEN or CTRL button to move the position of the dome then the message "CONTROL" displays on the screen.
- Move the dome to the desired position using joystick and set the zoom level using the zoom in or zoom out.
- Press IRIS CLOSE or release CTRL button then the message of "CONTROL" disappears on the screen.
- 5. The '*' mark is appeared then the Preset is saving automatically.

To insert title, move cursor to **TITLE**: and set proper title by joystick. If you don't select the Title of the preset, the **PRESET**xx will be displayed. (xx: the recalled Preset Number)

You can select the Home Position from the saved presets.

3.3-2 Set ShortCut Preset

- First of all move the dome to the desired position using joystick and set the zoom position using the zoom in or zoom out.
- Press [Preset Number] you want to save and press [PGM] and [PRST] button in sequence.

For example, if you want to save to number 23, press $2 + 3 + \overline{PGM} + \overline{PRST}$ button in sequence.

3.3-3 Recall Presets

Press **Preset Number** and press **PRST** button.

For example, if you want to recall the Preset 13, press 1 + 3 + PRST button in sequence.

3.3-4 Home Position

The Home Position is the one of the Saved Presets. If press $\boxed{\text{HOME}}$ button, the PTZ will be go to the Home Position.

▲ / ▼ : move cursor up and down.

◀ / ▶: move cursor left and right or select or change values.

 : change character at TITLE: or change the saved preset number on the '==' mark

√ESC: exit current menu.

3.4-1 Set Tours

- 1. Move cursor to TOUR: and select tour number by using joystick.
- To insert the Title of the Tour, move cursor to TITLE: and set proper title by using joystick. If Title is not selected, TOURxx will be displayed. (xx: the recalled Tour number)
- 3. Set Dwell time(10~99 seconds) by using joystick at **DWELL TIME**.
- 4. SPEED is selectable from 1 to 10.
- Move cursor to '==' and select proper preset number by Zoom In / Out. Each point can be inserted progressively.
- 6. Move cursor to right at the SAVE menu to save this Tour.
- 7. Move cursor to right at the **EXIT** menu to escape this menu.

3.4-2 Delete Tour

- 1. Move cursor to TOUR: and select tour number to delete.
- 2. Press **HOME** button then the selected Tour will be deleted.

3.4-3 Recall Tour

Press <u>Tour Number</u> and press <u>TOUR</u> button. For example, if you want to recall the Tour 3, press <u>3</u> + <u>TOUR</u> button in sequence. When turning the **TOUR ELEMENT** on at the **OSD DISPLAY MENU**, the Preset number consisting of the recalled Tour will be displayed.

3.5 Auto Scan Menu

AUTO SCAN MENU
SCAN: 1
TITLE: ========
START POINT: 000.0 000.0
END POINT: 000.0 000.0
SCAN DIR.: CW
SPEED: 07
SWAP: OFF
SAVE
EXIT

▲ / ▼ : move cursor up and down.

◀ / ▶: move cursor left and right or select or change values.

• : change character at TITLE:

√|ESC|: exit current menu.

3.5-1 Set Auto Scans

- 1. Move cursor to SCAN: and select scan number by using joystick.
- To insert the Title of the Auto scan, move cursor to TITLE: and set proper title by using joystick. If title is not selected, SCANxx will be displayed. (xx : the recalled Scan number)
- Move cursor to START POINT: and press IRIS OPEN or CTRL button to move the position of the dome then the message "CONROL" displays on the screen.
- Move the dome to desired PAN starting point, Tilt point of Auto Scan range and Zoom postion.
- Press <u>IRIS CLOSE</u> or release <u>CTRL</u> button then the message of "CONTROL" disappears on the screen. It is saved automatically.
- 6. Move cursor to END POINT: Move the dome to desired PAN end point of Auto Scan range and set end position by pressing IRIS OPEN or CTRL button. When the setting is completed, press IRIS CLOSE or release CTRL button.
 - (Note. At this point, only PAN position will be adjustable.)
- SCAN DIR. means Auto Scan Direction. CW is Clock Wise and CCW is Counter Clock Wise.
- 8. SPEED is selectable from 1 to 10.

- SWAP will change the PAN position between START POINT and END POINT.
- 10. Select SAVE to save this Auto Scan.
- 11. Select **EXIT** to escape this menu.

3.5-2 Set ShortCut Auto Scan1

You can adjustable the Auto Scan 1's Pan Limit by using the ShortCut button.

- First of all move the dome to the desired Pan Start position using Joystick.
- Press 6 + 5 + PGM + PRST button in sequence. Then "SAVING: PAN LEFT AND TILT" is displayed and the message will be disappeared after a few seconds.
- To adjust the Pan End Point, move the dome to the desired position by using the Joystick.
- Press 6 + 6 + PGM + PRST button in sequence. Then "SAVING: PAN RIGHT" is displayed and also the message will be disappeared after a few seconds.

3.5-3 Delete Auto Scan

- 1. Move cursor to SCAN: and select scan number to delete.
- 2. Press **HOME** button then the selected Scan will be deleted.

3.5-4 Recall Auto Scan

Press Auto Scan Number and press SCAN button. For example, if you want to recall the Scan 2, press 2 + SCAN button in sequence. If you don't select title, SCANxx will be displayed. (xx: the recalled Scan number)

AREA TITLE MENU
AREA: 1
TITLE: AREA1=====
START POINT: 000.0
END POINT: 045.0
SAVE
EXIT

▲ /▼: move cursor up and down.

◀ / ▶: move cursor left and right or select or change values.

: change character at TITLE:

◀ /ESC : exit current menu.

3.6-1 Set Area Titles

Each area title has default value. There are 8 Area titles that are dividing 360 degrees into 8 equal parts.

- To modify to another value, move to START POINT: and press [RIS OPEN] or CTRL button to move the position of the dome then the message "CONTROL" displays on the screen.
- Move the dome to desired starting point of Area Title range and set start point.
- 3. Press **IRIS CLOSE** or release **CTRL** button then the message of "**CONTROL**" disappears on the screen.
- 4. The END POINT is the same as the START POINT. But the END POINT should be larger than the START POINT.
- 5. Select **SAVE** to save this Area Title.
- 6. Select EXIT to escape this menu.

3.6-2 Delete Area Titles

- 1. Move cursor to AREA: and select area number to delete.
- 2. Press **HOME** button then the selected Area will be deleted.

3.6-3 Display Area Titles

When turning the **AREA TITLE**: of the **OSD DISPLAY MENU** to ON and escape this menu, **AREA**x will be displayed at the screen.

(x : area title number)

ALARM MENU
INPUT: NC
OUTPUT: NO
OPTION: TIME OUT
PRESET: 01
HOLDING TIME: 10 SEC
SAVE AND EXIT
EXIT

▲ /▼ : move cursor up and down.

◀ / ▶ : move cursor left and right or select or change values.

◀ /ESC : exit current menu.

3.7-1 Set Alarm

INPUT: NC / NO / OFF

You can select alarm input types here. **NC** means Normal Close, **NO** means Normal Open. If you select input types as **OFF**, the alarm input is disregarded.

OUTPUT: NC / NO / OFF

You can select alarm output types here. **NC** means Normal Close, **NO** means Normal Open. If you select output types as **OFF**, the alarm output is disregarded.

- OPTION: TIME OUT / MOMENTARY
 - TIME OUT: The alarm is automatically reset after the alarm duration time has completed.
 - MOMENTARY: When alarm is triggered, the dome will maintain alarm activation until it is reset manually.
- · PRESET: XX

The selected preset number is called when the alarm is activated. The camera remains at the preset position during alarm. After release alarm, dome camera returns to previous function.

· HOLDING TIME: 10~99 SEC

This is activated when the option is **TIME OUT** and selectable from 10 seconds to 99 seconds.

3.7-2 Release Alarm

If you want to release alarm, press **ALRM** button at any alarm option.

3.8 Camera Setup Menu

CAMERA SETUP MENU
FOCUS CONTROL
WB CONTROL
AE CONTROL
L/L CONTROL
PICTURE
NIGHT SHOT CONTROL
INITIALIZE CAMERA
EXIT

▲ / ▼ : move cursor up and down.

select.

√ ESC : exit current menu.

· FOCUS CONTROL

Controls the focus mode and digital zoom.

WB CONTROL

Controls the white balance mode.

AE CONTROL

Controls the auto exposure options.

L/L CONTROL

Controls access between changing line lock and internal mode.

PICTURE CONTROL

Controls the sharpness, mirror, freeze, nega/posi, DNR, PIP setting.

· NIGHT SHOT CONTROL

Controls the IR cutoff filter.

· INITIALIZE CAMERA

Resets to the default settings for the camera setup menu only.

3.8-1 Focus Control Menu

FOCUS CONTROL MENU
MODE: AUTO
DISTANCE: 0.1M
DIGITAL ZOOM: OFF
SAVE AND EXIT
EXIT

▲ / ▼ : move cursor up and down.

◀ / ▶: move cursor left and right or select or change values.

◀ / ESC : exit current menu.

· MODE: AUTO / MANUAL

You can select focussing mode, auto or manual.

• DISTANCE: 0.1 / 1.0 / 1.5 / 2.5 / 6.0 M Camera doesn't focus nearer than this range.

• DIGITAL ZOOM: ON / OFF

When this is set to OFF, camera zoom uses only optical zoom mode.

3.8-2 WB Control Menu

WB CONTROL MENU
MODE: AWB
RGAIN:
BGAIN:
SAVE AND EXIT
EXIT

▲/▼: move cursor up and down.

◀ / ▶: move cursor left and right or select or change values.

◀ / ESC : exit current menu.

MODE: AWB / INDOOR / OUTDOOR / MANUAL / WAWB

- AWB: Auto White Balance mode.

- INDOOR: Indoor White Balance mode.

- OUTDOOR: Outdoor White Balance mode.

- MANUAL: Manual mode. You can adjust R and B Gain manually.

- WAWB: Wide Range Auto White Balance mode.

• R-GAIN: 0 ~ 255

You can adjust the red color gain only in the manual mode.

• B-GAIN: 0 ~255

You can adjust the blue color gain only in the manual mode.

3.8 Camera Setup Menu, continued

3.8-3 AE Control Menu

AE CONTROL MENU
MODE: AUTO
SHOT: NORMAL
SHUTTER:
IRIS:
GAIN:
BRIGHT: 30
BLC MODE: OFF
BLC LEVEL: -SAVE AND EXIT
EXIT

▲ / ▼ : move cursor up and down.

◀ / ▶: move cursor left and right or select or change values.

◀ / ESC : exit current menu.

MODE: AUTO / SHUTTER PRI / IRIS PRI / MANUAL / FLICKERLESS

- AUTO: means all functions are activated automatically.
- **SHUTTER PRI**(ority): means that you can set only shutter value and others are controlled automatically.
- IRIS PRI(ority): You can set only iris value and others are automatic in mode.
- MANUAL: The Shutter, Iris and Gain are adjustable in this mode.
- FLICKERLESS: This function is used to removing flicker when the format of camera signal does not coincide with power source frequency being used.
- SHOT: NORMAL / LOW-SHUTTER / WDR / DIS
 - Low-Shutter means Low Shutter Speed Mode.
 - WDR means Wide Dynamic Range
 - DIS means Digital Image Stabilization.
- SHUTTER: X60 / X32 / X16 / X8 / ... / 2000 / 4000 / 10000 You can set shutter speed in this menu.
- IRIS: F1.6 / F2 / F2.8 / F4 / F5.6 / F8 / F11 / F16 / F22 / F32 / CLOSE You can control lens's F number in this menu.
- GAIN: 0 ~ 30 DB

The value is changeable from 0 to 30.

• BRIGHT: 0 ~ 90

The brightness value is changeable from 0 to 90.

• BLC MODE: ON / OFF

The Back Light Compensation is active when **ON** is set.

• BLC LEVEL: 0 ~ 90

The BLC Level is selectable from 0 to 90.

3.8-4 L/L Control Menu

L/L CONTROL MENU
SYNC: INTERNAL
PHASE:
SAVE AND EXIT
EXIT

▲ / ▼ : move cursor up and down.

◀ / ▶: move cursor left and right or select or change values.

◀ / ESC : exit current menu.

MODE: INTERNAL / LINE LOCK

- **INTERNAL**: Synchronizes camera to an internal crystal. This choice is recommended if there is noise on the power line.
- LINE LOCK: Synchronizes camera to AC power. This choice eliminates picture roll in multi-camera systems.
- PHASE: PAL(0 ~ 620), NTSC(0 ~ 519)
 Optimizes the line lock mode to eliminate picture roll in multiphase power application.

3.8 Camera Setup Menu, continued

3.8-5 Picture Menu

PICTURE MENU
SHARPNESS: 08
MIRROR: OFF
FREEZE: OFF
NEGA/POSI: POSI
DNR: ON
PIP: OFF
SAVE AND EXIT
EXIT

▲/▼: move cursor up and down.

◀ / ▶: move cursor left and right or select or change values.

◀ / ESC : exit current menu.

· SHARPNESS: 0 ~ 15

The Sharpness can be controlled from 0 to 15 and the default value is 8.

MIRROR: ON / OFF

Video image can be reversed along vertical line.

• FREEZE: ON / OFF

The FREEZE is ON, you can see still picture.

• NEGA/POSI: NEGA / POSI

You can see the **NEGA**tive screen or **POSI**tive screen.

· DNR: ON / OFF

The DNR means Digital Noise Reduction.

· PIP: ON / OFF

The **PIP** means Picture In Picture. If ON state is selected, the small screen will be appeared at the lower right corner.

3.8-6 Night Shot Control Menu

NIGHT SHOT CONTROL MENU D/N MODE: AUTO D/N LEVEL: HIGH DELAY: 10 SEC SAVE AND EXIT EXIT

▲ / ▼ : move cursor up and down.

◀ / ▶: move cursor left and right or select or change values.

◀ / ESC · exit current menu.

D/N MODE: AUTO / BW / COLOR / GLOBAL

- AUTO: The camera automatically engages the switch from color to b/w depending on the ambient light, allowing the camera to be effective in day/night environments.
- GLOBAL: If you press 888 + ENTR(GLBL) in a state of global setting, every dome will change BW state. And if you press 999 + ENTR(GLBL) in a state of global setting, every dome will change COLOR state. At this state, the Dome ID doesn't matter.
- D/N LEVEL: HIGH / MID / LOW

Adjust the AGC Gain when the BW mode turns into the COLOR mode.

This is effective only in case of selecting the AUTO mode.

DELAY: 0 / 10 / 15 / 20 SEC

Adjust the working time of the filter when D/N operated. This is effective only in case of selecting the AUTO mode.

3.8 Camera Setup Menu, continued

3.8-7 Initialize Camera

If you run this menu, camera's all setting options are initialized as default setting.

CAMERA WILL BE INITIALIZED!! ARE YOU SURE? NO YES

3.9 Dome Setup Menu

DOME SETUP MENU
TILT AUTO FLIP: ON
485-TERMINATION: OFF
ACKNOWLEDGE: ON
AUTO CALIBRATION
PASSWORD
OSD DISPLAY
HOME FUNCTION
INITIALIZE DOME
DOME INFORMATION
SAVE AND EXIT
EXIT

▲ / ▼ : move cursor up and down.

◀ / ▶: move cursor left and right or select or change values.

◀ / ESC : exit current menu.

3.9-1 Tilt Auto Flip

Allows the dome camera to automatically turn 180 degrees when the camera tilts to its lowest position.

When the camera reaches the floor 90 degree tilt down, it will stop. Release the joystick handle instantly and then pull down to run the flip function. The tracking speed will be the same as previous.

3.9-2 485-Termination

The device which in connected at end of line, whether it be a dome camera or keyboard controller, must have the cable for communication terminated by setting this menu. Without proper termination, there is potential for control signal errors. Total length of the cable for communication should not exceed 1.2km

3.9-3 Acknowledge

If you select ON, acknowledge will be send to Keyboard or DVR and so on. If you select OFF, there is no acknowledge.

3.9 Dome Setup Menu, continued

3.9-4 Auto Calibration Menu

AUTO CALIBRATION MENU EXECUTION EXIT

▲ / ▼ : move cursor up and down.

select.

◀ / ESC : exit current menu.

If there is an error on angle of the Camera, just select **EXECUTION** of the **AUTO CALIBRATION MENU**. The motor of the Pan/Tilt will adjust its angle automatically.

3.9-5 Password Menu

PASSWORD MENU
DISPLAY: OFF
CHANGE PASSWORD: ====
SAVE AND EXIT
EXIT

▲ /▼: move cursor up and down.

◀ / ▶ : move cursor left and right or select or change values.

• : change character at CHANGE PASSWORD:

√ESC: exit current menu.

If you want to protect the whole menu, select **ON** at the **DISPLAY MENU**. The **PASSWORD MENU** will be displayed when the <u>MENU</u> button is pressed to enter the **MAIN MENU**. After the correct password is selected, move the joystick right then you can see the **MAIN MENU**.

Default Password is '1234'.

3.9-6 OSD Display Menu

OSD DISPLAY MENU
DOME ID: ON
PT POSITION: ON
PAN DIRECTION: OFF
TOUR ELEMENT: OFF
AREA TITLE: OFF
ALL DISPLAY
DEFAULT
SAVE AND EXIT
EXIT

▲ / ▼ : move cursor up and down.

◀ / ▶: move cursor left and right or select or change values.

◀ / ESC : exit current menu.

You can see only video or some character with video. Each element is able to handle in several. The PT POSITION means Pan / Tilt Position. If the PAN DIRECTION is ON, 'N' is displayed at the 0 degree. If the TOUR ELEMENT is ON, the preset number consists of the recalled tour is displayed at the lower left corner. Selecting ALL DISPLAY makes all menu ON state. DEFAULT makes only DOME ID & PT POSITION to ON and the rest will be OFF.

3.9-7 Home Function Menu

HOME FUNCTION MENU MODE: ON FUNCTION TYPE: PRESET FUNCTION NUMBER: 01 DWELL TIME: 010 SEC SAVE AND EXIT EXIT

▲ / ▼ : move cursor up and down.

◀ / ▶: move cursor left and right or select or change values.

◀ / ESC : exit current menu.

Mode: ON/OFF

Function type: Preset / Tour / Auto scan

Function number: xx Dwell time: 10 ~ 600sec.

The Home Function can be set so that the camera automatically goes to a preset, a tour or auto scan after the Keyboard control has been idle for some amount of time.

For example, the Mode is **ON**, Auto Scan 2 is selected, and the Dwell time is 20 seconds. If the Keyboard control is idle for 20 seconds, the camera goes to Auto Scan 2 until stop.

3.9-8 Initialize Dome

INITIALIZE DOME MENU
PRESET DATA
TOUR DATA
AUTO SCAN DATA
AREA TITLE DATA
DOME SETUP DATA
ALL DOME DATA
EXIT

▲ / ▼ : move cursor up and down.

select.

◀ / ESC : exit current menu.

You can initialize all data separately. Selecting **ALL DOME DATA** will initialize all dome data (preset, tour, auto scan, area title, dome setup) except camera setting.

3.9-9 Dome Information

DOME INFORMATION VERSION: VX.XX EXIT

This menu just displays dome's software version information.

Troubleshooting and Maintenance



4.1 Troubleshooting

If you experience difficulties operating your camera, refer to the following. If the guidelines do not enable you to solve the problem, contact an authorized technician.

PROBLEM	CHECK
Nothing appears on the screen.	Check all cable connections and the power of the interface unit.
The image on the screen is dim.	Is the lens dirty? If so, clean the lens with a soft, clean cloth.
The camera is not working properly and the surface of the camera case is hot.	Is the camera connected to the proper power?
The contrast on the screen is too weak.	Adjust the contrast feature of the monitor. Is the camera exposed to strong light? If so, change the camera position.
The image on the screen is flickers.	Does the camera face directly into the sun or fluorescent lighting? If so, reposition camera. Check for flickerless setting of the camera.

4.2 Preventive Maintenance

Following the preventive maintenance schedule allows detection and correction of minor faults before they become serious and cause equipment failure.

Periodically perform the following:

- 1. Inspect all connecting cables for deterioration or other damage.
- Wipe housing with a clean damp cloth. Clean P.C. dome/windows with an approved P.C. cleaner.*
- 3. Verify that all the mounting hardware is secure.
- * (plastic polish cleaner)

5 Specifications



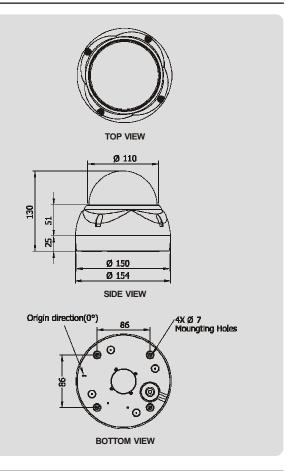
5.1 General Specifications

MODEL		DDEL	NTSC	PAL	
DOWER	POWER Power Source Power Consumption		DC12V / AC24V ±10%		
POWER			12.0 Watts		
	Image Sensor		1/4" SONY Super HAD CCD		
	Total	Pixels	811(H) x 508(V)	795(H) × 596(V)	
	Scanning System		2:1 interlace		
	Scani	ning Frequency	15.734KHz(H), 59.94Hz(V)	15.625KHz(H), 50Hz(V)	
	Sync. System		Internal / Line Lock		
	Resolution Min. illumination		480 TV lines(COLOF	R), 530 TV lines(B/W)	
			0.5 lux (Color), 0.05 lux (B/	W), 0.001 lux (Low-shutter)	
	ideo (Output	1.0 Vp-p (75 ohm, composite)		
	S/N R	atio	more than 50dB (AGC off)		
	Came	era Control	RS485 (FastraxII, Pelco-D, Pelco-P)		
	F	Focus Mode	Auto / Manual		
		Distance	0.1M / 1.0M / 1.5M / 2.5M / 6.0M		
GENERAL		Digital Zoom	Off / On		
		White Balance	AWB / Indoor / Outdoor / Manual / WAWB		
	C	Auto Exposure	Auto / Shutter PRI / Iris PRI / Manual / Flickerless		
	T	Shot	Normal / DIS / WDR / Low Shutter		
	0	Shutter Speed	1/60 ~ 1/10,000 sec.	1/50 ~ 1/10,000 sec.	
	N		[x2 ~ x60 (Low Shutter)]	[x2 ~ x60 (Low Shutter)]	
	С	Iris Control	Auto / Manual (F1.6 ~ F32, Close)		
	A M	Gain Control	Auto / Manual (0 ~ 30dB)		
	E	BLC	Off / On		
	R A	Brightness	0 ~ 90 steps		
		Sharpness	0 ~ 15 steps		
		Picture	Mirror, Freeze, Nega/Posi, DNR, PIP		
		D&N Control	Auto / BW / COLOR / GLOBAL [Mechanical IR cut filter]		

5.1 General Specifications, continued

	MC	DDEL	NTSC PAL		
Panning Angle		Panning Angle	360°continuous rotation		
		Barrela a Carrel	Manual : Max. 1509sec.		
		Panning Speed	Auto: Max. 375%sec.		
		Tilting Angle	0°- 90° [Auto Flip : Off / On]		
		Tilting Speed	Manual : Max. 1509sec.		
		Tilling Speed	Auto: Max. 375%sec.		
	F U	Preset	60 Positions		
	č	Tour	Courses (1~4 x 16 Preset)		
	N T	Auto Scan	Courses (4)		
	i	Area Title	Courses (8)		
	O N	Alarm Input	Off / NC / NO (1 Channel)		
GENERAL	D	Alarm Output	Off / NC / NO (1 Channel)		
	ō	Alarm State	Time out / Momentary		
	M E	485-Termination	Off / On		
	-	Auto Calibration	Execution		
		Password Protection	Off / On (OSD setup protection)		
		Home Function	Off / On (Preset, Tour, Auto Scan)		
		Dome ID	63 ID (DIP switch)		
		Baud Rate	2400 / 4800 / 9600 / 19200 bps (DIP switch)		
	L	Zoom Ratio	Optical x22, Digital x11 Zoom (Video AF)		
	E N	Focus Length	f = 3.9 mm ~ 85.8 mm		
	s	Aperture Ratio	F1.6 (wide) ~ F3.7 (tele)		
CONNECTOR & Alarr Oper ETC. Oper Stora	Power	Input	3-pin terminal block		
	Video	Output	BNC connector		
	RS485	Control	2-pin terminal block		
	Alarm	Input/Output	4-pin terminal block		
		ting Temperature	-10 C ~ +50 C		
	Operating Humidity		0 ~ 96% (non-condencing)		
	Storage Temperature		-20 C ~ +60 C		
		al Dimension	Ø154.0 x 130 (H) mm (Bubble diameter Ø110.0)		
Weight		t	1300g		

5.2 Dimensions



APPENDIX. PELCO PROTOCOL FUNCTION LIST

FUNCTION	KEY	Preset No.	How To.	EXAMPLE
PRESET	PRESET	1 - 60	No.+PRESET	1+PRESET
PRESET shortcut saving	NOTE1	1- 60	NOTE1	NOTE1
RUN PAN ZERO	PRESET	34	No.+PRESET	34+PRESET
SCAN	PRESET	61 - 64	No.+PRESET	61+PRESET
SCAN LEFT LIMIT	NOTE1	65	NOTE1	NOTE1
SCAN RIGHT LIMIT	NOTE1	66	NOTE1	NOTE1
TOUR	PRESET	71 - 74	No.+PRESET	71+PRESET
ALARM RESET	PRESET	90	No.+PRESET	90+PRESET
RUN HOME	PRESET	91	No.+PRESET	91+PRESET
DOME MENU	PRESET	95	No.+PRESET	95+PRESET
ESC KEY	PRESET	96	No.+PRESET	96+PRESET
CTRL_KEY(In Menu)	PRESET	95	No.+PRESET	95+PRESET
VERSION DISPLAY	PRESET	99	No.+PRESET	99+PRESET

NOTE1

To program, position camera, enter desired preset number(1-60), and hold down **PRESET** for two seconds.

In Cm6700 and Cm6800 modes, a label appears on the monitor. Select 'SET' and press **ACK** or tap the joystick to the right and release.





INNOVATION